

REMARKS/ARGUMENTS

The Office Action dated August 2, 2006 has been reviewed and carefully considered. Claims 20-67 and 76-89 are pending in this application, with claims 20, 57, 78, and 83 being the only independent claims. Reconsideration of the above-identified application, in view of the above amendments and the following remarks, is respectfully requested.

Rejection of Independent Claims 20 and 57 under 35 U.S.C. §102

Independent claims 20 and 57 are each rejected under 35 U.S.C. §102 as anticipated by U.S. Patent No. 4,901,093 (Ruggiero).

As stated in MPEP §2131, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Ruggiero fails to disclose "forming continuous jets of the treating agent by directing the treating agent through openings in at least one nozzle plate", as recited in claim 20, and "said at least one nozzle plate including openings in which continuous jets of the treating agent are formed when the feeding chamber is at least partially filled with pressurised treating agent", as recited in claim 57.

Ruggiero discloses a method and apparatus for printing with ink jet chambers, wherein a single impulse ink jet chamber has a plurality of orifices (see col. 3, lines 28-30 of Ruggiero). In each chamber 36, a diaphragm 44 is coupled to transducers 46, 48 (col. 3, lines 39-41). When a transducer is energized, the diaphragm 44 is moved toward the orifices 40 and droplets are ejected from the orifices 40 (col. 3, lines 51-56). The Examiner alleges that Ruggiero discloses a continuous jet. However, the formation of droplets recited by Ruggiero can

not be considered to disclose "forming continuous jets of the treating agent by directing the treating agent through openings in at least one nozzle plate", as expressly recited in independent claim 20. The Examiner contends that Ruggiero is continuous for a small amount of time. However, Ruggiero only discloses that droplets are formed. There is no disclosure of a jet being formed even for a very short period of time.

The Examiner states that openings in which continuous jets are formed" as recited in independent claim 57 is merely intended use. However, the nozzles must be designed to form a continuous jet. For example, an orifice may be so small that only a droplet is released at one time even under high pressure. In Ruggiero, the orifices are designed to release only droplets and not a jet when the diaphragm is actuated. Since Ruggiero discloses only that droplets are formed when the diaphragm is actuated, Ruggiero fails to teach or suggest "said at least one nozzle plate including openings in which continuous jets of the treating agent are formed when the feeding chamber is at least partially filled with pressurised treating agent", as recited in claim 57.

In view of the above remarks, independent claims 20 and 57 are not anticipated by Ruggiero.

Rejection of Claim 83 under 35 U.S.C. §102

Claim 83 stands rejected under 35 U.S.C. §102 as anticipated by U.S. Patent No. 5,649,867 (Briggs).

Briggs fails to disclose "at least one nozzle plate that at least partly closes said at least one feeding chamber" and "an actuator operatively connected to said at least one nozzle plate for moving said at least one nozzle plate relative to said at least one feeding chamber so

that said at least one nozzle plate is at least partly outside the width of the area of the moving surface that is to be treated”.

Briggs discloses a portable waterplay structure having various water forming devices. The Examiner alleges that the adjustable shower disclosed at col. 7, lines 40-47, discloses the claimed actuator. However, the claimed actuator moves a nozzle plate relative to the feeding chamber. The entire shower head can not be considered to be a nozzle plate. If anything, only the portion indicated by 151 in Fig. 2 of Briggs can be considered to be the nozzle plate. This portion is not moved relative to a chamber. Rather, it is moved with the chamber in the shower head when the shower head is adjusted. Furthermore, the nozzle plate having a width greater than the surface is described in a different embodiment.

In view of the above remarks, the rejection of claim 83 under 35 U.S.C. §102 should be withdrawn.

Rejection of Claims 20 and 57 under 35 U.S.C. §103

Independent claims 20 and 57 are rejected under 35 U.S.C. §103 as unpatentable over U.S. Patent No. 5,789,022 (Kustermann) in view of U.S. Patent No. 4,072,772 (Franz) and U.S. Patent No. 6,063,450 (Bernert).

The Examiner alleges that “forming continuous jets of the treating agent by directing the treating agent through openings in at least one nozzle plate, the openings in which the jets are formed being defined solely by the at least one nozzle plate”, as recited in claim 20 is disclosed by Franz. However, as acknowledged by the Examiner, Franz discloses that a working fluid medium is passed through a tube 278 (see col. 10, line 68 to col. 11, line 2 of Franz). Furthermore, Franz teaches that the holes 280, in which the exit end of the tube 278 is inserted, are designed so that a carrier medium can be passed through the holes 280 to atomize the

working fluid medium passing out of the tube 278 (see col. 11, lines 7-13). Atomized fluid is not a continuous jet. Since Franz discloses that the working fluid medium flows through a tube 278 and that the flow is atomized, Franz fails to teach or suggest the step of “forming continuous jets of the treating agent by directing the treating agent through openings in at least one nozzle plate, the openings in which the jets are formed being defined solely by the at least one nozzle plate”, as expressly recited in independent claim 20.

The Examiner also alleges that “said openings in which the jets are formed are defined solely by said at least one nozzle plate”, as recited in claim 57, is disclosed by Franz. As stated above, the Franz discloses a pipe 278 which at least partially forms the jet. Accordingly, Franz fails to teach or suggest a nozzle plate having openings, wherein “said openings in which the jets are formed are defined solely by said at least one nozzle plate”.

In view of the above remarks, the rejection of independent claims 20 and 57 should now be withdrawn.

Rejection of claims 78 and 83 under 35 U.S.C. §103

Independent claims 78, 82, and 83 stand rejected under 35 U.S.C. §103 as unpatentable over Ruggiero in view of U.S. Patent No. 5,736,195 (Haaland).

The combined teachings of Ruggiero and Haaland fails to disclose, teach, or suggest “moving the at least one nozzle plate relative to the at least one feeding chamber”, as recited in claim 78, or “an actuator operatively connected to said at least one nozzle plate for moving said at least one nozzle plate relative to said at least one feeding chamber”, as recited in claim 83. The Examiner alleges that Ruggiero discloses moving the nozzle transversely to the direction of the moving surface. Even if that statement were true — which it is not, because the paper does not move when the print head scans the page — Ruggiero fails to disclose, teach or suggest that

the nozzle moves relative to the at least one feeding chamber. In contrast, Ruggiero discloses that the chamber 36 and orifices 40 are both parts of the print head and are moved simultaneously with the print head. Haaland does not disclose moving the nozzle plate.

Thus the combined teachings of Ruggiero and Haaland can not be considered to teach or suggest "moving the at least one nozzle plate relative to the at least one feeding chamber", as recited in independent claims 78 and 83.

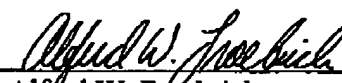
For all of the above reasons, the independent claims 20, 57, 78, and 83 are allowable over the prior art of record.

Dependent claims 21-56, 58-67, 76-77, 79-82, and 84-89 are allowable for at least the same reasons as are independent claims 20, 57, 78, and 83, as well as for the additional reasons contained therein.

It is believed that no fees or charges are required at this time in connection with the present application. However, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,
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